Hypertension Advocacy Project- India (HAPI)

Project Completion Report

March -September 2023

Index

Contents

Executive Summary

The Hypertension Advocacy Project- India (HAPI) completed its project duration in September 2023 fulfilling the three objectives outlined in the project. Hypertension is a growing health concern in India, with around 200 million affected adults of which only 20 million have it under control[1]. The Government of India has set up a "25 by 25" goal to reduce premature mortality from non-communicable diseases by 25% by 2025, including a 25% reduction in high blood pressure prevalence[2]. PAIR Academy aims to support this goal by enhancing evidence-based strategies for hypertension management.

The primary goal is to strengthen patient voices and integrate them at the policymaker level to create national networks of hypertension advocates, including individuals affected by stroke, CKD, and CVD, along with their caregivers.

Objectives:
1. Host two national-level roundtables with policymakers and influencers.
2. Embed patient voices within professional networks.
3. Generate demand for hypertension prioritization through sensitization and mobilization.

Project Implementation:

Objective 1:

Aims to influence policy makers and other key stakeholders by convening a national roundtable discussion that brings together representatives from the Ministry of Health and Family Welfare (MoHFW), World Health Organization (WHO), civil society organizations, public health organizations, and physician associations. The goal is to facilitate meaningful dialogue and collaboration among these stakeholders to advance the objectives of the project. A round table with the Members of parliament has been conducted on 2nd August, 2023 and concluded successfully.

Objective 2:

Works towards embedding patient voices within professional networks, thereby elevating their perspectives, and ensuring their active participation in healthcare decision-making processes. By featuring the interactions between our team and patients, we aim to showcase the valuable insights and experiences shared by individuals directly affected by healthcare issues to professional healthcare organizations such as ICMR, MoHFW, ISA etc. who are instrumental in bringing a change at policy level. This objective was accomplished by undertaking two webinars with experts, correspondence, and meetings with key stakeholders, working with Stroke support alliance- a patient advocacy network, creating 10 patient stories in text format, 3 video patient stories and two videos with key messages from patients, and documenting videos, interviews and patient testimonials. A patient charter launched at the ministerial round table further enhanced the outreach. Social media campaigns were used to disseminate messages and amplify the voice of patients and caregivers. The network of patient groups included representation from individuals affected by stroke, chronic kidney disease (CKD), and cardiovascular diseases (CVD), as well as their caregivers.

Objective 3.

A pilot model that involves partnering with Health and Wellness Centers, Village Health Committee and PRIs in two blocks across two states, to identify key challenges and opportunities for Hypertension control, create awareness amongst key stakeholders and identify steps to create robust referral pathways and care continuum collaborations.

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[1] https://www.who.int/india/health-topics/hypertension

[2] https://www.ihci.in/

Key takeaways and learnings

- **Access to Healthcare:** There is generally easy access to primary care for hypertension treatment.

- **Prevalence of Tobacco (chewable and smoking) and Alcohol:** Tobacco and alcohol use are widespread in both the districts. In most of the villages of Sonipat i.e., Shamri and Kundali smoking (Hukkah) in age group of 40-55 and above is very prevalent. The number of liquor stores have grown four-fold in the last two years in Alwar making access to alcohol easy.

- **Awareness of Diet and Lifestyle:** Most participants of Alwar demonstrated a high level of awareness regarding the role of diet and lifestyle modifications in managing hypertension. In Sonipat about 30% had various myths and misconceptions including HT being harmless and a phenomenon that happens to everybody with age. Most respondents are unaware of age-appropriate blood pressure readings in both districts.

- **Knowledge of Risks:** Only 40% could name the risk factors and the complications that arise from them. Almost 100% of respondents were aware of hypertension but had never gone for preventive screening.

- **Medication Adherence:** Participants from most villages reported either a lack of trust in the efficacy of medicines or showed reluctance in continuing with prescribed medication, of which about 50% never went back for a follow-up after their first visit. Several discontinued medicines without consultation of a doctor.

- **Medicine Procurement:** In some villages of Sonipat i.e. Kheri Damkan (lath) and Baroda Mor, and in Alwar most of the villages of Reni including Pada and Bileta, participants mentioned the need to purchase medicines from outside sources, indicating a lack of availability at Primary Health Centers (PHCs).

- **IEC materials and Data Handling:** All PHCs had IEC material on Hypertension, however, IEC materials were only in the form of wall hangings/paintings. There were no interactive materials, videos, or other means for patients to watch and engage in. All PHCs had NCD registers maintained by ANMs in Haryana, and data is hand collected and uploaded into the NCD portal at the PHC, making it difficult for ANMs and ASHAs to track and trace. Messages on adherence and follow up were not present either.

- **Referral system in PHC/CHC for complications:** Referral systems were patchy, and participants did not have clarity on referral pathways in either district.

- **Patient groups and community groups:** There are no patient support groups or community groups in any village or block. Most patients rely on families and caregivers for support. The old and inform are at a disadvantage as lack of community support sometimes leads to decreased access.

- **Measures to increase awareness about hypertension:** The participants proposed several initiatives, including awareness camps, improved medication options, free availability of branded medicines, and the establishment of PHC/Sub-Health Centers (SHCs) with round-the-clock doctor availability. Participants also suggested community skits and plays to raise awareness around common conditions and their risk factors.

THE REPORT

Background

Hypertension is a major public health issue both globally and in India. In India, it accounts for 10.8% of all deaths and 4.6% of disability-adjusted life years (DALYs). Moreover, the adult hypertension prevalence has shown a drastic increase in the past three decades in both urban and rural areas.

Nearly 63% of total deaths are due to noncommunicable diseases in India, with cardiovascular disease (CVD) accounting for 27% of these deaths. Hypertension is among the most important risk factors for CVDs. However, it remains poorly controlled due to low awareness, lack of control through appropriate primary care, and poor follow-up. The World Health Organization (WHO) has estimated that 31% of India's population, or 188.3 million people, are living with hypertension. At least 4.6 million deaths in India can be prevented by 2040 if half of the hypertensive population controls their blood pressure. To address this issue, the Government of India launched the Indian Hypertension Control Initiative (IHCI) in November 2017 that aims to fast-track access to treatment services for over 220 million people in India who have hypertension.

Regular monitoring of blood pressure, adopting a healthy lifestyle, and staying on prescribed treatment are crucial for reducing hypertension and its complications. IHCI focuses on providing a continuum of care from early detection, to control of hypertension and improving the quality of care. Of the estimated 200 million adults affected by hypertension, only around 20 million have it under control, which accounts for a pressing need for intervention. With this project, the Government of India has set ambitious targets, including the "25 by 25" goal, that aims to reduce premature mortality due to non-communicable diseases (NCDs) by 25% by 2025. A key component of this target is also to reduce the prevalence of high blood pressure by 25% by 2025.

The Hypertension Advocacy Project-India (HAPI project report discusses the project's methodology, including data collection tools and analytical methods. Additionally, the report provides insights into healthcare infrastructure, finance schemes, medicine procurement, and the Indian Hypertension Control Initiative in Haryana and Rajasthan. Lastly, it summarizes the key findings from focus group discussions, key informant interviews, and in-depth interviews, highlighting both achievements and challenges in hypertension management in the project locations.

Scope and Need

To assess the reach and access of national programs in the specified regions of Haryana and Rajasthan, specifically in Sonipat and Alwar districts, in four blocks of Sonipat, Gohana, Malakhera, and Reni. The primary focus is on partnering with local primary health centres (PHCs) and conducting a range of conversations and interviews to measure levels of awareness and understanding and its needs are driven by several key factors:

Lack of Patient Empowerment: Empowering patients and their families with knowledge and resources is crucial for effective hypertension management. Patient voices are often underrepresented in healthcare decision-making, and the project aims to address this gap by strengthening patient advocacy.

Community Mobilization: Community engagement is vital for public health initiatives. Mobilizing patient groups, caregivers, and community members to raise awareness and advocate for better hypertension management is a strategic approach to tackling the issue at the grassroots level.

Regional Disparities: There are regional variations in healthcare access and awareness within India. By selecting locations like Sonipat,

Haryana, and Alwar, Rajasthan, the project aims to target areas that may have specific healthcare challenges and work towards bridging regional disparities in hypertension awareness and care.

High Prevalence of Hypertension: India is grappling with a significant and growing burden of hypertension. Both the blocks have several factors that could influence the prevalence of hypertension in the population. These are increased and easy access to alcohol and tobacco, sedentary lifestyles and a shift to fast food.

Low Awareness and Control: A substantial portion of individuals with hypertension in India remain undiagnosed or inadequately managed. Many people are unaware of their condition, and even those diagnosed may not have it under control. This lack of awareness and control contributes to preventable complications and healthcare costs.

Our primary goal is to strengthen patient voices and urge leaders to build a national network of hypertension advocates. These would also have representation from stroke, CKD and CVD survivors and caregivers.

Objective 1:
The Round table discussion titled **"Community-Based Interventions and Medication Adherence for Hypertension in India: Bringing the patient voice to inform policy and health systems strengthening"** took place from 18:30 to 20:00 IST.

Best practices and challenges associated with community-based interventions and patient engagement in ensuring medication adherence among hypertension patients in India were discussed and deliberated. A presentation grounded in the findings of a pilot study executed

in two blocks each in Haryana and Rajasthan was shared with the audience and dignitaries. A patient and a caregiver from Alwar shared their story and journey, the challenges faced by them, their perceptions around hypertension management and their expectations from the healthcare system. The Members of Parliament were very supportive and agreed that large scale initiatives were necessary to raise awareness and improve uptake of services from the public sector. The efforts of the government would not bear results unless trust in the systems was restored and robust referral and follow up mechanisms were put in place.

Dr. Vandana Chauhan honourable MP Rajya Sabha said - "**We must ensure women are being cared for and their individual contexts considered when we design treatment delivery mechanisms. For instance, how can we best care for a pregnant woman with high blood pressure who is at great risk and ensure she gets treatment at her doorstep? We must listen to stories of women and help them overcome problems of access**."

Mr. Sujit Kumar, honourable MP Rajya Sabha said- "**To improve uptake of services, treatment adherence and good follow up, patients and caregivers need to be included as equal partners in the healthcare delivery models. We should undertake a nation-wide community dialogue to better understand the challenges people face in receiving treatment**."

Dr L Hanumanthiah said – "**Collaboration between healthcare professionals and community members ensures a comprehensive approach to hypertension management**".
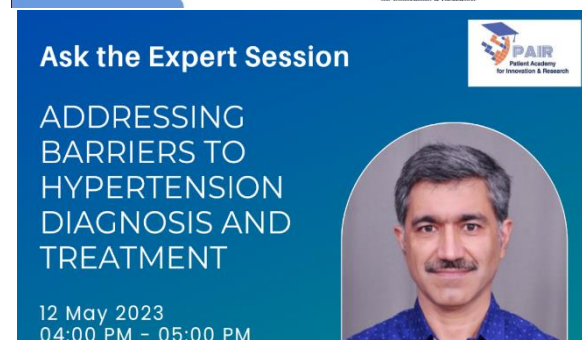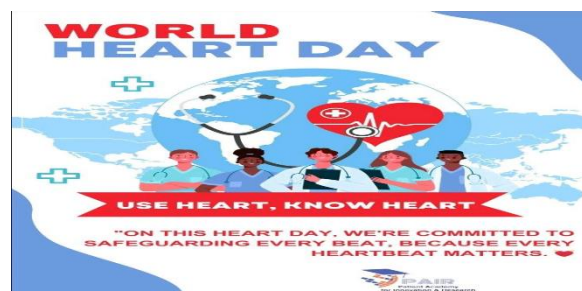
A press note released on the occasion garnered wide coverage and reach. A weeklong social media campaign followed the launch of the patient charter and representation made to various stakeholders.

Objective 2:

The objective is to embed patient voices within professional networks, thereby elevating their perspectives and ensuring their active participation in healthcare decision-making processes.

Two webinars with experts on the topics, **Unmasking Hypertension- Understanding the hidden risks and consequences of uncontrolled hypertension** with Dr Paramjit Singh and **Addressing barriers to hypertension diagnosis and treatment** with Dr. Rakesh Kakkar were organised. The webinars were attended by 60 online attendees. E mail outreach was done to 13 stakeholders and the patient charter was shared with them. Correspondence and meetings with key stakeholders was undertaken. Stroke support alliance- a patient advocacy network with over 500 members was engaged actively in the discussions, 10 patient stories were documented as video stories and a text story compendium was created. A short video on patient experiences was made as an advocacy tool and disseminated at various platforms including YouTube. A patient charter launched at the ministerial round table further enhanced the outreach. Social media campaigns were used to disseminate messages and amplify the voice of patients and caregivers. The network of patient groups included representation from individuals affected by stroke, chronic kidney disease (CKD), and cardiovascular diseases (CVD), as well as their caregivers.

Objective 3.

A pilot model that involves partnering with Health and Wellness Centers, Village Health Committee and PRIs in two blocks across two states, to identify key challenges and opportunities for Hypertension control, create awareness amongst key stakeholders and identify steps to create robust referral pathways and care continuum collaborations.

Methodology

In our ongoing mission to address the critical issue of hypertension as a significant public health challenge in India, we have taken steps towards demand generation, aiming to prioritize hypertension through sensitization and mobilization of patients and families.

A PATIENT CHARTER FOR HYPERTENSION CONTROL

Recommendations from the community to improve quality of care

1. Update the Charter of Patients Right (2018) to meet the requirements of patients living with chronic conditions such as hypertension.

2. Make blood pressure monitoring available at the community level by training all front line workers, supplying them with well calibrated BP machines.

3. Train people to self-measure, make well calibrated BP machines available at home and use telemedicine to ensure accurate measurement.

4. Ensure empathetic and regular counselling by health officers and front-line workers to help patients and caregivers adhere to medication.

5. Make special provisions for pre-eclampsia monitoring for pregnant women who have the condition or are at risk.

6. For the elderly and the differently abled, make door-step delivery available to ensure uninterrupted supply of medicines.

7. Ensure uninterrupted medicine supply and make diagnostic interventions available to prevent loss of lives.

8. Provide interactive educational material in local languages and run a sustained awareness and behaviour change campaign which focusses on lifestyle modification, tobacco and alcohol cessation.

9. Transport facility is planned and provided in every village through PRI for emergency situations. An emergency responder team is trained and connected to nearest referral centre.

10. Forward and backward referral mechanisms are established and operational to have continuity of care. Patients at risk are referred to tertiary and specialty care without any loss of time and those in recovery have follow up mechanisms at their nearest PHC.

11. Make hospitals patient friendly (with seating arrangements, drinking water and ventilation). Establish patient support groups in every hospital.

12. Develop and establish a community monitoring mechanism through Village Health and Sanitation Committees and PRIs.

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Selection of Pilot Locations

The selection of pilot locations was based on strategic considerations, including proximity to New Delhi and the potential impact on the National Capital Region (NCR). (Annex 1) We chose two districts for this pilot model:

1. **Sonipat, Haryana:** Sonipat is strategically located within the NCR and offers a unique opportunity to engage with a diverse population.

2. **Alwar, Rajasthan:** Alwar, another district within the NCR, provides a valuable perspective on hypertension awareness and management in a different cultural context.

Pilot Model

Overview: The pilot model focused on generating awareness about hypertension by collaborating with key stakeholders in the healthcare ecosystem. The core components of the pilot model are as follows:

Partnering with Health and Wellness Centers: Partnerships with local Health and Wellness Centers, which serve as the first point of contact for many individuals seeking healthcare services. These centres play a crucial role in disseminating information about hypertension, its risks, and management.

Engagement with Village Health Committees (VHCs): Village Health Committees are instrumental in driving health-related initiatives at the grassroots level. By collaborating with VHCs, we aim to tap into their community-based networks and knowledge to reach a broader audience and encourage hypertension awareness. Through our partnerships with these stakeholders, we are actively working to generate awareness and collecting insights about hypertension among the population in Sonipat and Alwar. This includes conducting awareness campaigns, performing FGDs (focus group discussions), KIIs (Key informant Interviews) and IDIs (In depth Interviews) with patients, caregivers, and families. Please click on the

button below to access the village locations of the government health centre.

<div style="text-align:center">My Maps</div>

Tools for data collection Project Preparation:

Focus Group Discussions: two in each village to gather insights from gender, socioeconomic and literacy differentiations. Participants in different villages expressed varying opinions, primarily focusing on healthcare access, awareness, and medication.

Key Informant Interviews: two in each village from healthcare providers. Interviews with healthcare workers provided insights into healthcare infrastructure and medicine supply chain issues.

In-Depth Interviews: two in each village from patients and caregivers. Conducted in both states, these interviews explored lifestyle changes and knowledge of patients regarding health conditions.

HTN Questionnaire: A bilingual questionnaire (Hindi and English) was developed to collect data on demographics, health behaviours, and hypertension management.

500 questionnaires were distributed in Alwar and Sonipat and we received 424 responses. Consent forms were used to inform participants about the study's objectives, risks, and benefits.

Analytical methods:

For a comprehensive examination of the data gathered from the Focus Group Discussions (FGDs), Key Informant Interviews (KIIs), and In-Depth Interviews (IDIs), a qualitative and quantitative analysis was conducted to understand the trends in the two blocks and villages. The primary methods employed in this analysis are detailed below:

FGD Analysis Tools: The content within the transcripts of the FGDs underwent a meticulous examination. Our objective was to extract critical information, encompassing

Block	Village	KII	FGD/Participants	IDI	Questionnaire
ALWAR, RAJASTHAN					
Malakhera	Poonkhar	2	2/14+9	2	25
	Haldina	1	2/13+11	2	25
	Prithvipura	2	2/8+10	2	25
	Shyamganga	2	2/12+9	2	25
	Baleta	2	2/10+7	2	25
Reni	Bileta	1	2/9+11	2	25
	Pada	2	2/14+12	2	25
	Machadi	2	2/11+8	2	25
	Pinan	2	2/8+10	2	25
	Reni	2	2/6+9	2	25
SONIPAT, HARYANA					
Gohana	Bhutana	1	01/11	0	0
	Shamri	2	2/16+9	0	25
	Khanpur Kalan	2	2/13+9	2	25
	Nahri	1	1/12	0	25
	Kheri Damkan	2	2/10+19	3	0
Sonipat	Kundali	2	1/10	0	25
	Baroda Mor	2	1/12	0	12
	Halalpur	2	2/11+8	2	25
	Mohana	2	2/13+9	2	25
	Rohat	2	2/9+7	1	12
Total	**20 Villages**	**36 KII**	**36 FGD**	**20 IDI**	**424 Questionaries**

participants' attitudes, beliefs, and the challenges they encounter in managing hypertension and accessing healthcare services. This process involved a thorough review of the transcripts to capture and record participants' viewpoints, opinions, and perceptions regarding hypertension management and healthcare services. We categorized the data into pertinent themes or topics, establishing a structured framework for presenting our findings. By categorizing this information, we condensed and emphasized key insights, offering a clear and comprehensive overview of participants' perspectives on hypertension and healthcare services. No qualitative software was used, and analysis was conducted using excel.

KII Analysis Tools: we scrutinized the content of KII transcripts to distil essential points, including opinions, the availability of healthcare services, and reasons why patients may not be receiving proper treatment.

Subsequently, we summarized the key findings and highlighted noteworthy details provided by the key informants.

IDI Analysis Tools: In the analysis of In-Depth Interviews (IDIs), we delved into their personal experiences and insights related their treatment experience. By closely examining the content of the IDI transcripts, we identified key themes, concepts, and unique perspectives articulated by individual interviewees.

Questionnaires: The combination of quantitative analysis, data segmentation, and visualization allowed for a comprehensive examination of the questionnaire data. Data was keyed into excel for analysis.

Initial visits:

During the project's initial phase, the team conducted visits to the villages to establish the project's foundation. The primary aim of these visits was to collect firsthand data concerning the healthcare infrastructure and procedures

within these villages. While on-site, the team had the privilege of engaging with healthcare workers (HCWs) employed at the local healthcare centres. These interactions yielded initial insights, which were subsequently analyzed and incorporated into the project's framework.

During the first visit to the villages, finding the Primary Health Centers (PHCs) posed a significant challenge as many villages were remote and not easily identifiable, some even absent from maps. As a result, the team had to invest substantial effort in acquiring and incorporating the village coordinates onto maps. This proactive step was intended to simplify navigation for the next team's visit by minimizing navigation challenges.

Brief background of districts and villages-population

The primary livelihood in these villages revolves around agriculture, with some residents also operating local shops.

Health System Statistics: **Health** Finance Schemes in Haryana and Rajasthan, like many other Indian states, offer various health finance schemes to provide support and healthcare services to its residents. These schemes include:

Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) and State Health Insurance Schemes (Both Haryana and Rajasthan have their own state-level health insurance schemes that complement PM-JAY), offering additional coverage and benefits to residents. Additionally, Rashtriya Swasthya Bima Yojana (RSBY) is another government health insurance program applicable in Haryana, primarily targeting families below the poverty line and providing cashless coverage for hospitalization expenses.

Health infrastructure in the villages of Haryana is relatively good, while it is comparatively less developed in Rajasthan. Recent improvements include an increase in the number of Sub Centers and the appointment of Community Health Officers (CHOs).

The Indian Hypertension Control Initiative (IHCI) is a nationwide program launched by the Government of India to fast-track access to hypertension treatment services for over 220 million people in India who have hypertension. The program aims to improve hypertension management and control through a systematic approach, which includes regular monitoring of blood pressure, lifestyle interventions, and appropriate medication.

In Haryana and Rajasthan, the IHCI has been implemented to address the growing burden of hypertension in these states. The initiative involves the following key components:

IHCI promotes awareness about hypertension and encourages individuals to get their blood pressure checked regularly. Screening camps and awareness campaigns are organized to reach out to communities and identify individuals with hypertension. Healthcare workers, including ASHAs (Accredited Social Health Activists) and ANMs (Auxiliary Nurse Midwives), are trained to provide hypertension-related services, including blood pressure measurement and counselling on lifestyle changes and medication adherence. IHCI focuses on strengthening the healthcare infrastructure at the primary care level. This includes ensuring the availability of essential medicines for hypertension management at Primary Health Centers (PHCs) and Sub-Health Centers (SHCs). The program emphasizes the importance of data management and monitoring. Regular reporting and data collection mechanisms are put in place to track the progress of hypertension management and control.

The IHCI's uptake and rollout in Haryana and Rajasthan involve collaboration with state health departments and local healthcare facilities. The program aims to improve awareness, diagnosis, and management of hypertension, ultimately reducing the burden of cardiovascular diseases and related

complications in these states. Regular monitoring and evaluation are conducted to assess the program's effectiveness and make necessary adjustments to achieve its goals.

Procurement Mechanisms and supply chain:
In Haryana:

Government Procurement: The Haryana state government typically procures a significant portion of medicines for various healthcare programs, including those related to hypertension. Medicines are often procured through a centralized tendering process to ensure cost-effectiveness and quality.

Central Medical Stores: Haryana has central medical stores and warehouses where medicines, including those for hypertension, are stored and distributed to healthcare facilities at different levels, such as PHCs and SHCs.

Empanelment of Suppliers: The government empanels pharmaceutical companies and suppliers through a transparent bidding process. These empanelled suppliers provide medicines to government healthcare facilities based on agreed-upon terms and conditions.

Distribution Network: Haryana likely has a well-structured distribution network to transport medicines from central stores to local healthcare facilities. This network ensures that medicines are available where they are needed.

In Rajasthan:

Government Procurement: Similar to Haryana, the Rajasthan state government procures medicines for various health programs, including hypertension management. The procurement process involves tendering and contracts with pharmaceutical suppliers.

Rajasthan Medical Services Corporation (RMSC): RMSC, a government-owned entity, plays a crucial role in the procurement and distribution of medicines. It acts as the central procurement agency for the state and is responsible for sourcing quality medicines.

Central Warehousing: Rajasthan has central warehouses where medicines are stored before being dispatched to healthcare facilities. These warehouses are strategically located for efficient distribution.

Empanelment of Suppliers: Suppliers are empanelled through a competitive bidding process, and they are required to meet specific quality and pricing criteria set by RMSC.

Quality Assurance: Quality control and assurance are paramount. Medicines procured are subject to rigorous testing and quality checks to ensure they meet national and international standards.

Logistics and Distribution: Rajasthan has a well-organized logistics and distribution system to ensure medicines reach PHCs, SHCs, and other healthcare facilities in a timely manner.

FGD (Focus Group discussion) analysis
Our team conducted Focus Group Discussions (FGDs) in both districts, Sonipat and Alwar, revealing several common perceptions among the villagers. In the villages of Sonipat, Gohana, Malakhera, and Reni, during the FGDs, valuable insights were obtained concerning various aspects related to hypertension. The following insights were documented:

- **Access to Healthcare:** The FGDs revealed that there is generally easy access to primary care and hypertension treatment across the villages of Sonipat, but in Alwar, especially in the Malakhera block, there are some difficulties in accessing of the treatment due to the location of PHCs. Participants reported varying levels of difficulties, but overall, there is good access to healthcare services.

- **Prevalence of Tabaco (chewing and smoking) and Alcohol:** A large proportion of male respondents use tobacco and alcohol regularly in both the districts. In most of the villages of Sonipat i.e., Shamri and Kundali, there is a high

use of Smoking (Hukkah) in age group of (40 and above).

- **Awareness of Diet and Lifestyle:** Most participants of Alwar demonstrated a high level of awareness regarding the role of diet and lifestyle modifications in managing hypertension. In Sonipat, about 30% had various myths and misconceptions including HT being harmless and something that happens to everybody with age. Most respondents were unaware of age-appropriate blood pressure readings in both districts.

- **Knowledge of Risks:** While there is awareness of hypertension, there were some variations in knowledge about the potential risks associated with untreated hypertension. Almost 100% of the respondents who were aware of hypertension, had never gone for preventive screening, and only 40% could name the risk factors and the complications that arise from them. This indicates a need for targeted education on the consequences of unmanaged hypertension.

- **Medication Adherence:** Participants from most villages reported no discomfort or reluctance in continuing with prescribed medication, however about 50% never went back for a follow-up. Moreover, some individuals with co-morbidities experienced challenges in their daily routines due to medication intake, leading to them discontinuing the medicine without consultation of doctor.

- **Medicine Procurement:** In some villages of Sonipat i.e. Kheri Damkan (lath), Baroda Mor, and in Alwar most of the villages of Reni including Pada and Bileta, participants mentioned the need to purchase medicines from outside sources, indicating a lack of availability at Primary Health Centers (PHCs). This highlights the potential gaps in the healthcare infrastructure.

- **Referral system in PHC/CHC for complications:** Participants in Bhutana and Kundali expressed uncertainty regarding the referral system, while in Shamri, Haryana, and in Pada and Pinan in Alwar, it appeared that there was no established referral system for accessing the Community Health Centers (CHC) or General Hospital (GH), required patients to arrange their own transportation to the hospital. Only 20 % participants from Baroda Mor and Madeena in Haryana, as well as Machadi and Prithvipura, had awareness about the referral system.

- **Measures to increase awareness about hypertension:** The participants proposed several initiatives, including awareness camps, improved medication options, free availability of branded medicines, and the establishment of PHC/Sub-Health Centers (SHCs) with round-the-clock doctor availability.

KII (Key Informant Interviews) analysis

A total of 36 Key Informant Interviews (KIIs) were conducted,

Key Insights from Key Informant Interviews (KIIs):

1. **IHC Materials and Data Management:** In all Primary Health Centers (PHCs), informational materials related to Hypertension were present but limited to wall displays. There was no material for illiterate populations and a lack of counselling services specific to the condition. The doctors did spend time explaining the medicines and risk factors as well as methods to avoid any further complication by keeping the hypertension in control. PHC OPDs were crowded with little opportunity for the doctors to spend meaningful time with the patients. In many PHCs, doctors had several administrative duties and were unavailable on the day of camps and sometimes during OPD hours. Furthermore, there was an absence of messages regarding adherence and follow-up.

2. **Regional Variations:** There are distinct variations in healthcare delivery and access across regions, which are influenced by state-specific healthcare policies and practices.

3. **Reliance on External Medication:** Some elderly people in villagers of Sonipat (Rohat, Halalpur and Mohana) lack faith in government-provided medications at PHCs and prefer to purchase medications from external sources. This reliance on external purchases leads to out-of-pocket expenses.

IDI (In-depth Interview) analysis

A total of 20 In-Depth Interviews (IDIs) were conducted under the project, with a deliberate selection of participants representing both the genders and age groups to ensure equal representation of men and women. These interviews primarily focused on exploring lifestyle changes and assessing the participants' overall knowledge regarding their health condition. and shed light on the perception of government-provided medication at the Primary Health Centre (PHC), Community Health Centre (CHC), and Sub-Health Centre (SHC) levels.

1. **Lack of Faith in Government medications:** A significant portion of participants expressed skepticism about the efficacy of government-provided medications at various healthcare centres. This skepticism contributes to their preference for external sources.

2. **Lack of awareness towards follow ups:** The residents in both villages exhibit minimal awareness regarding follow-up appointments and consistently taking their prescribed medications, most visit a doctor only when sick.

3. **Myths and Misconceptions:** Numerous myths and misunderstandings exist concerning treatment and diagnostics, such as the belief that a hypertension diagnosis will inevitably lead to a series of tests and complications. Many also felt that starting and taking medicines on a daily basis will lead to dependence, eventually the medicines will loose their effect and they would have to shift to stronger medication.

4. **The need of old age homes:** Due to the inability of their families to transport them to the hospital, a significant portion of the elderly population struggle to access necessary

medications. As a result, day care and full-time centres play a crucial role in delivering essential care to this demographic

Conclusion and recommendations

The HAPI project addresses a critical health issue in India by empowering patients and raising awareness about hypertension. The diverse data collection methods provide valuable insights into various aspects of hypertension management and healthcare delivery. These findings will aid in developing effective strategies to combat hypertension and improve the overall health of the population.

- Almost 100% of respondents are aware of Hypertension, however only 60% could name the risk factors and the complications that arise from them.
- A large proportion of male respondents use tobacco and alcohol regularly. The number of liquor stores have grown four-fold in the last two years.
- Most respondents are unaware of age-appropriate blood pressure readings.
- Almost all respondents have never gone for preventive screening, About 50% never went back for a follow-up
- About 30% had various myths and misconceptions including HT
- All PHCs had IEC material on Hypertension. However, IEC material was on the walls. Messages on adherence and follow up were not present.
- All PHCs had NCD registers maintained by ANMs.
- 80% villagers said PHC was within walkable distance and reaching it was easy, however less than 30% said they went to the PHC at the onset of symptoms.
- Those that took medicines from private sector found those medicines unavailable at the PHCs.
- Alwar had full stock of medicines and patients were offered 1-3 months of medicine stock. Sonipat had medicine outages and patients

were sometimes offered only one week of medicines.

- PHCs could not offer the tests prescribed by the private sector doctors, like USG, CT scan and X Ray. Basic lab tests were unavailable in some PHCs.
- Navigating the district hospitals was time taking and patients preferred to go to the private sector as services were more prompt.
- Referral systems were not well established and patients who did go to the district hospitals were not referred back to the PHCs for follow up with the patients.

There are some myths also prevalent there in the rural areas of Alwar as well as Sonipat:

- Medicines need to be taken only when sick.
- Medicines are "hot" and will cause harm or dependency if taken for long time.
- Stopping smoking or reducing alcohol is enough to manage HT and medicines need not be taken.
- Alternate systems of medicines are better as medicines will cause harm.
- Religious and other beliefs prevail especially in the older populations.

Recommendations:

1. Update the Charter of Patients Right (2018) to meet the requirements of patients living with chronic conditions such as hypertension.

2. Make blood pressure monitoring available at the community level by training all front-line workers and supplying them with well calibrated BP machines.

3. Train people to self-measure, make BP machines available at home and use telemedicine to ensure regular monitoring, counselling and follow up.

4. Ensure empathetic and regular counselling by health officers and front-line workers to help patients and caregivers adhere to medication.

5. Make special provisions for pre-eclampsia monitoring for pregnant women who have the condition or are at risk.

6. For the elderly and the differently abled, make door-step delivery available to ensure uninterrupted supply of medicines.

7. Ensure uninterrupted medicine supply and make diagnostic interventions available to prevent loss of lives.

8. Provide interactive educational material in local languages and run a sustained awareness and behaviour change campaign which focusses on lifestyle modification, tobacco and alcohol cessation.

9. Provide planned transport facilities in every village through PRI for emergency situations. An emergency responder team should be trained and connected to the nearest referral centre.

10. Establish forward and backward referral mechanisms to have continuity of care. Patients at risk are to be referred to tertiary and specialty care without any loss of time and those in recovery should have access to follow up mechanisms at their nearest PHC.

11. Make hospitals patient friendly (with seating arrangements, drinking water and ventilation). Establish patient support groups in every hospital.

12. Develop and establish a community monitoring mechanism through Village Health and Sanitation Committees and PRIS.

Reni (Block) Villages	Type of healthcare centre	Population	Literacy rate	Coordinates of Health Centers
Reni	CHC	1,73,422	58.72%	27.168735 76.73879
Bileta	PHC	20,000	59.7%	27.326396 76.692191
Machadi	PHC	20,695	69.6%	27.255705 76.66476
Pada	PHC	20,786	77.35%	27.247098 76.706501
Pinan	CHC	31,500	66.81%	27.259689 76.759085
Malakhera (Block) Villages	Type of healthcare centre	Population	Literacy rate	Coordinates of Health Centers
Shyamganga	PHC	40,000	63.42%	27.372601 76.686762
Haldina or Haldeena	PHC	27,488	55.52%	27.430564 76.664905
Poonkhar	PHC	5,571	54.86%	27.324914 76.59521
Baleta	PHC	7,401	80.68%	27.350998 76.554367
Prithvipura	PHC	24,300	51.69%	27.391334 76.547186
Sonipat (Block) Villages	Type of healthcare centre	Population	Literacy rate	Coordinates of Health Centers
Kundli	PHC	100,000	66.3%	28.8736, 77.12334
Rohat	PHC	4,678	69.0%	28.932038,76.97583
Juan	CHC	6,186	78.5%	29.0617476,76.900
Mohana	PHC	7,170	70.2%	29.03506, 76.86896
Halalpur	PHC	30,650	71.7%	28.8628, 77.0119
Gohana (Block) Villages	Type of Health Center	Population	Literacy rate	Coordinates of Health Centers
Baroda	PHC	7103	64.41%	29.1420144,76.6086334
Shamri	PHC	3388	63.9%	29.198596 76.813878
Khanpur Kalan	PHC	12,544	72.23%	29.157979 76.79469
Nahri	PHC	3527	64.02%	28.86484,77.044648
Kheri Damkan	PHC	4447	62.36%	29.106097,76.76555

Annex 1: Details of villages along with co-ordinates and other demographics

End of the report